ACCESSION NR: AP4030351

ENCLOSURE: 01

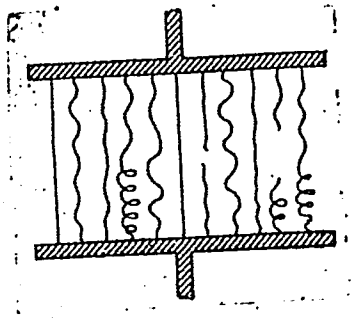

Fig. 1. Model of a breakdown element, consisting of an assortment of flexible inelastic filaments of different lengths.

3/3

ACCESSION NR: AP4028427 S/0181/64/006/004/1039/1047

AUTHORS: Govorkov, V. G.; Indenbom, V. L.; Papkov, V. S.; Regel', V. R.

TITLE: The dislocation theory of the initial stages of deformation in single crystals of germanium

SOURCE: Fizika tverdogo tela, v. 6, no. 4, 1964, 1039-1047

TOPIC TAGS: germanium, dislocation theory, creep, kinetic equation, crystal deformation, temperature dependence, time dependence

ABSTRACT: Beginning with the simple kinetic equation for deformed crystals as used by Gilman and Johnston, $\dot{\epsilon} = Nbv$, where ϵ is the rate of plastic flow, N the density of mobile dislocations, b Burgers vector, and v the velocity of deformation, the authors have studied the theory of dislocations in direct application to slightly deformed crystals of germanium. They have compared the results with experimental data on the relations of deformation and creep to conditions under which the properties are measured. A comparison of measured and computed values is shown graphically in Fig. 1 on the Enclosure. Good agreement was obtained between experimental data and theoretical considerations both for rate of deformation and

Card 1/3

ACCESSION NR: AP4028427

for creep. The authors consider this further confirmation of the validity of the view that the deformational properties of single crystals of germanium may be described by the kinetic theory of dislocations; and they consider their results contrary to the concept that such deformation is due to dislocation rupture at atmospheric impurities. The authors think great promise is to be found in the joint application of phenomenological consideration of dislocation theory, macroscopic study of temperature and time dependence of deformational properties in a crystal, and microscopic study of the deformational mechanism. Orig. art. has: 8 figures and 23 formulas.

ASSOCIATION: Institut kristallografii AN SSSR, Moscow (Institute of Crystallography, AN SSSR)

SUBMITTED: 070ct63 DATE ACQ: 27Apr64 ENCL: 01

SUB CODE: SS, EC NO REF SOV: 005 OTHER: 011

Card 2/3

ACCESSION NR: AP4028427

ENCLOSURE: 01

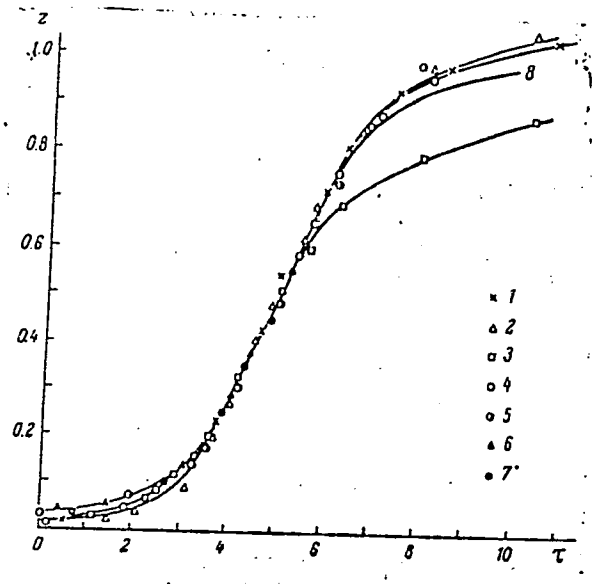

Fig. 1. Curves showing creep in single crystals of Ge, plotted on relative time-displacement axes. Temperature = 520C; stress, in kg/mm^2: 1 - 10.8; 2 - 9.3; 3 - 7.5; 4 - 5.9; 5 - 5.1; 6 - 4.0; 7 - 3.4; 8 - theoretical curve.

Card 3/3

ACCESSION NR: AP4043783 S/0190/64/006/008/1450/1457

AUTHOR: Vershinina, M. P.; Regel', V. R.; Cherny*y, N. N.

TITLE: Effect of U-V irradiation on polymer strength

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 6, no. 8, 1964, 1450-1457

TOPIC TAGS: polymer strength, mechanical stress, UV irradiation, polymer failure, polymer degradation, capron fiber

ABSTRACT: The dependence of the strength of polymers subjected simultaneously to mechanical stress and U-V irradiation on temperature and time has been studied for capron fibers. The study is based on principles developed by S. N. Zhurkov. Zhurkov has suggested that the mechanical failure of polymers is a result of the thermal degradation of macromolecules which is activated by mechanical stresses. He has also established the formula

$$\tau = \tau_0 e^{(U_0 - \gamma\sigma)/RT}$$

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ACCESSION NR: AP4043783

for the rupture life (τ) of specimens at temperature T and under stress σ; τ_0, U_0, and γ are constants having specific physical meaning. The rupture life of capron fibers was studied under various conditions. The results of the experiments, given in Figs. 1 and 2 of the Enclosure, show the effect of U-V irradiation on the fiber strength and indicate that in the presence of such irradiation the dependence of the fiber strength on temperature and time cannot be described by Zhurkov's formula with the usual values of the coefficients τ_0, U_0, and γ. The effect of U-V irradiation is explained on the basis of further experiments, analysis of Zhurkov's formula, and the assumption that the failure of fibers is the result of the combination of two processes: degradation in accordance with Zhurkov's formula and degradation caused by irradiation. "The authors express their gratitude to S. N. Zhurkov for his interest in the study and for his valuable advice." Orig. art. has: 6 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe (Physico-technical Institute)

SUBMITTED: 26Sep63 ATD PRESS: 3088 ENCL: 02

SUB CODE: OC, OP NO REF SOV: 010 OTHER: 001

Card 2/4

ENCLOSURE: 01

ACCESSION NR: AP4043783

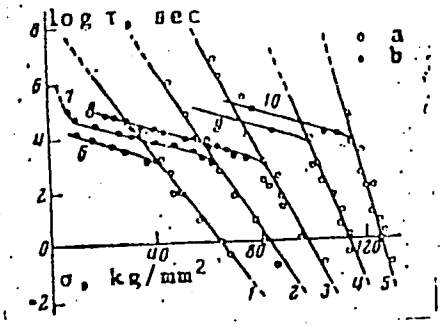


Fig. 1. Dependence of the logarithm of the rupture life log τ of capron fibers on stress σ, with and without U-V irradiation at different temperatures

1, 6 - 130C; 2, 7 - 80C; 3, 8 - 25C; 4, 9 — -60C; 5, 10 - -110C; a - without irradiation; b - with irradiation.

Card 3/4

ENCLOSURE: 02

ACCESSION NR: AP4043783

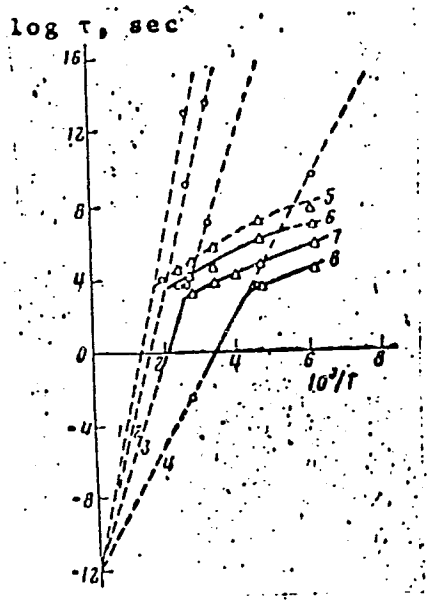


Fig. 2. Dependence of the logarithm of the rupture life log τ on reversed temperature 1/T of capron fibers at various stresses (kg/mm^2)

1, 5 - 0; 2, 6 - 25; 3, 7 - 60; 4, 8 - 100

Card 4/4

REGEL', V.R.; CHERNYY, N.N.

Lasting quality of polymeric fibers and films in a state of stress under the action of ultraviolet radiation. Khim. volok. no.6: 50-54 '65. (MIRA 18:12)

1. Fiziko-tekhnicheskiy institut im. A.F. Ioffe AN SSSR.
Submitted July 9, 1964.

SABADUS, Valeria, conf.; DAN-REBENCIUC, E., dr.; REGHIS, E., dr.

Current problems in perinatal and neonatal pathology. Padiatria (Bucur.) 14 no.3: 193-202 My-Je '65.

1. Clinica de pediatrie a Institutului de medicina, Timisoara (for Sabadus). 2. Sectia de nou-nascuti din Clinica de obstetrica a Institutului de medicina, Timisoara for Dan-Rebenciuc, Reghis)

L 37204-66 EWT(m)/EWP(j)/T IJP(c) WW/RM
ACC NR: AP6012420 (A) SOURCE CODE: UR/0183/65/000/006/0050/0054

AUTHOR: Regel', V. R.; Chernyy, N. N.

ORG: Physical-Technical Institute im. A. F. Ioffe AN SSSR (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Durability of polymeric fibers and films under stress when subjected to ultraviolet irradiation

SOURCE: Khimicheskiye volokna, no. 6, 1965, 50-54

TOPIC TAGS: synthetic fiber, uv irradiation, light radiation effect, polymer physical chemistry, rupture strength, mechanical stress, mechanical fatigue, ~~empirical equation~~

ABSTRACT: The effect of ultraviolet light on the strength of stressed polymeric fibers and films was examined. 16 different polymeric materials exhibited identical characteristics with respect to the relationship of their durability when under stress and subjected to uv light. An empirical equation was found. This relationship is explained by the superimposition of two breakdown processes--a fluctuation process and the process of destruction due to the action of light.

UDC: 677.4:539.1.043

Card 1/2

L 37204-66
ACC NR: AP6012420

Specific physical terms can be attached to the parameters of the empirical equation. This empirical relationship can be used in determining light stability of stressed polymers. Orig. art. has: 13 equations, 4 figures and 1 table.

SUB CODE: 07,11/ SUBM DATE: 09Jul64/ ORIG REF: 012/

Card 2/2 mlp

ACC NR: AP6026685 SOURCE CODE: UR/0181/66/008/008/2364/2369

AUTHOR: Regel', V. R.; Muinov, T. M.

ORG: Physico-Technical Institute im. A. F. Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Use of a mass spectrometer for studying the kinetics of polymer destruction on the basis of the yield of volatile products

SOURCE: Fizika tverdogo tela, v. 8, no. 8, 1966, 2364-2369

TOPIC TAGS: mass spectrometry, polymer structure, polymerization kinetics

ABSTRACT: It was found in an earlier mass spectrometry experiment that, during mechanical destruction, polymers yield the same volatile products as during thermal destruction. The volatile products form as a result of secondary radical reactions following the mechanical breaking of macromolecular chemical bonds. Earlier studies have provided valuable information on the kinetics of polymer destruction and the relationship between destruction and deformation. In this paper, a further mass spectrometry study is made of the liberation of volatile products from polymers under stress and, in particular, the speed of separation as a function of the applied stress. It is shown that, in accordance with the kinetic theory of the strength of solids, destruction begins at the instant stress is applied, and that a relation exists between deformation and destruc-

ACC NR: AP6026685

tion. If the volatile products indeed form as suggested, the rate of their formation during steady state creep will depend exponentially on the applied stress. When a stress is applied, the yield increases rapidly, then drops off to a steady value. Results show that polymer destruction is like a thermofluctuation process in which chemical bonds are broken in sequence, whereby free radicals are formed and volatile products develop as a result of secondary radical reactions. Orig. art. has: 6 figures.

SUB CODE: 20/ SUBM DATE: 06Jan66/ ORIG REF: 008

Card 2/2

L 32661-66 EWT(m)/EWP(j)/T IJP(c) WW/RM
ACC NR: AP6015049 (A) SOURCE CODE: UR/0190/66/008/005/0834/0840

AUTHOR: Anufriyev, G. S.; Pozdnyakov, O. F.; Regel', V. R.

ORG: Physicotechnical Institute im. A. F. Ioffe (Fiziko-tekhnicheskiy institut)

TITLE: Application of mass spectrometry to the study of polymer thermal degradation

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 5, 1966, 834-840

TOPIC TAGS: ~~polymer~~, polymethylmethacrylate, monomer, mass spectrometer, activation energy, POLYMER DEGRADATION, THERMAL DECOMPOSITION

ABSTRACT: A time-transient mass spectrometer with a stroboscope transformer of emitted signals has been used for investigating the composition and the kinetics of liberation of volatile products of polymethylmethacrylate thermal decomposition. The advantages of this method over others were demonstrated. The mass spectrum of the monomer and of the products of polymethylmethacrylate thermodegradation were recorded. The activation energy of polymethylmethacrylate thermodegradation at the initial stage was found to be 30 kcal/mol and in subsequent heating 50 kcal/mol. The authors thank B. A. Mamyrin for his help and

Card 1/2 UDC: 678.01:54

L 32661-66
ACC NR: AP6015049 O

participation in discussions of the results. Orig. art. has: 5 figures, 3 formulas and 1 table. [Based on authors' abstract] [NT]

SUB CODE: 11, 20/ SUBM DATE: 03May65/ ORIG REF: 011/ OTH REF: 006

Card 2/2 BLG

L 52550-66 EWT(m)/EWP(j)/T IJP(c) WW/RM
ACC NR: AP6015050 (A) SOURCE CODE: UR/0190/66/008/005/0841/0845

AUTHOR: Regel', V. R.; Muinov, T. M.

ORG: Physicotechnical Institute im. A. F. Ioffe (Fiziko-tekhnicheskiy institut)

TITLE: Application of mass spectrometry for the investigation of the kinetics of separation of volatile products from polymers under stress

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 5, 1966, 841-845

TOPIC TAGS: ~~polymer~~, polystyrene, polymethylmethacrylate, polyvinyl alcohol, mass spectrometry, CHEMICAL SEPARATION

ABSTRACT: The kinetics of the separation of volatile products from polymer samples (polymethylmethacrylate, polystyrene, and polyvinyl alcohol) under stress has been investigated using a time-transient mass spectrometer. The volatile products separate from the moment of the application of stress, not only after rupture. It was proved that rupture begins at the moment stress is applied. It was determined that the kinetics of separation of volatile products is analogous to the deformation kinetics, which points to their close connection. There is an exponential relationship between the separation rate of

Card 1/2 UDC: 678.01:53

L 32660-66
ACC NR AP6015050

volatile products and the stress applied. Orig. art. has: 3 figures.
[Based on authors' abstract]. [NT]

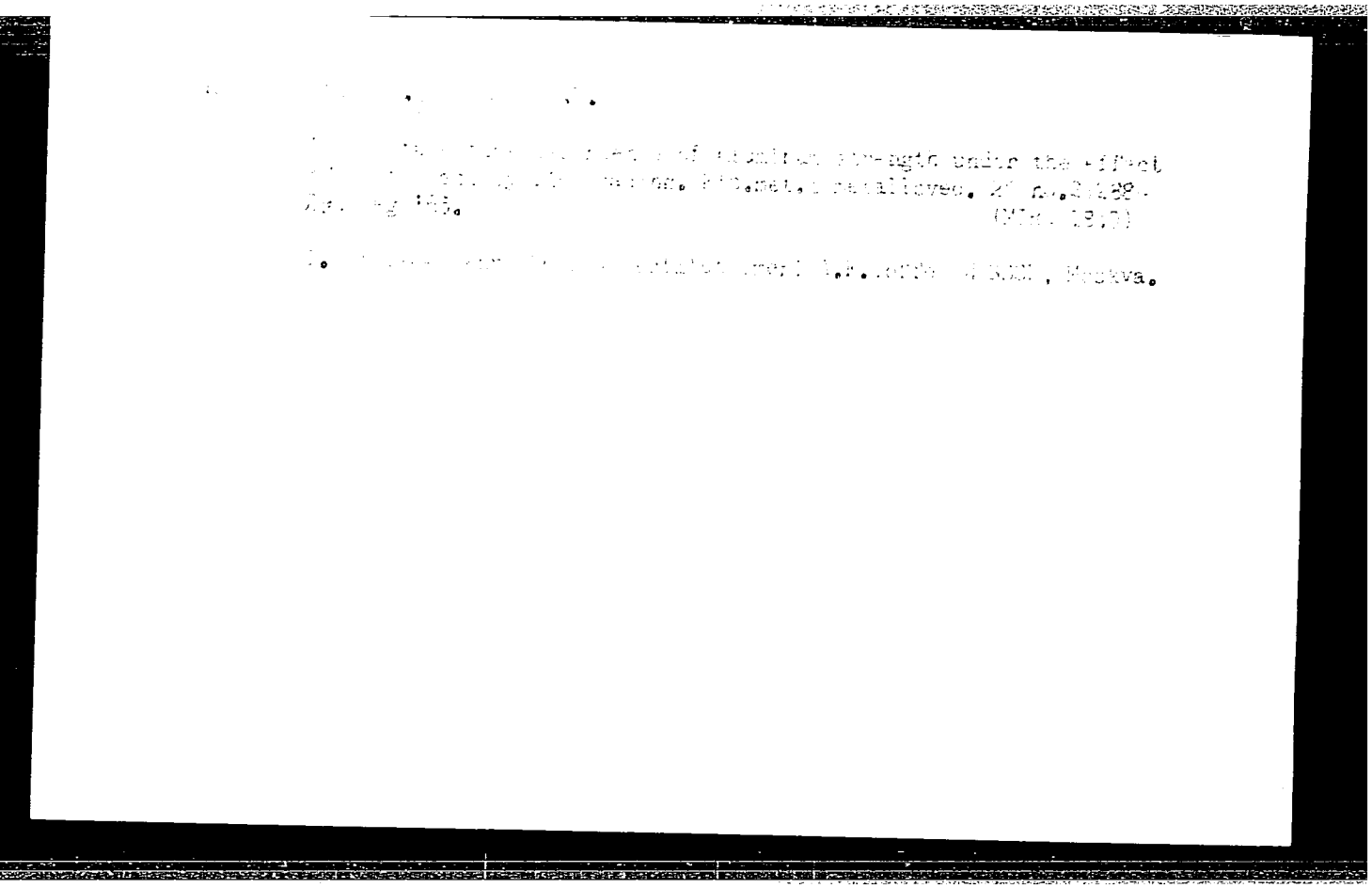
SUB CODE: 11/ SUBM DATE: 03May65/ ORIG REF: 005

Card 2/2 BLG

LEKSOVSKIY, A.M.; REGEL', V.R.

Longevity of polymers under the effect of cyclic loading. Vysokom. soed. 7 no.6:1045-1050 Je '65. (MIRA 18:9)

1. Fiziko-tekhnicheskiy institut imeni A.F.Ioffe AN SSSR, Leningrad.



REGEL, V. R.

"Mass-spectrometric study of the yield of volatiles by the solids rupture."

report submitted for Intl Conf on Fracture, Sendai, Japan, 12-17 Sep 65.

Phys-Tech Inst, AS USSR.

L 61054-65 EWT(m)/EPF(c)/EWG(v)/EWP(j)/T/EWA(c) Pc-4/Pe-5/Pr-4/Ps-4 RPL
WW/RM

ACCESSION NR: AP5016508 UR/0190/65/007/006/1045/1050
678.01 : 53

AUTHORS: Leksovskiy, A. M.; Regel', V. R.

TITLE: The longevity of polymers under cyclic loading

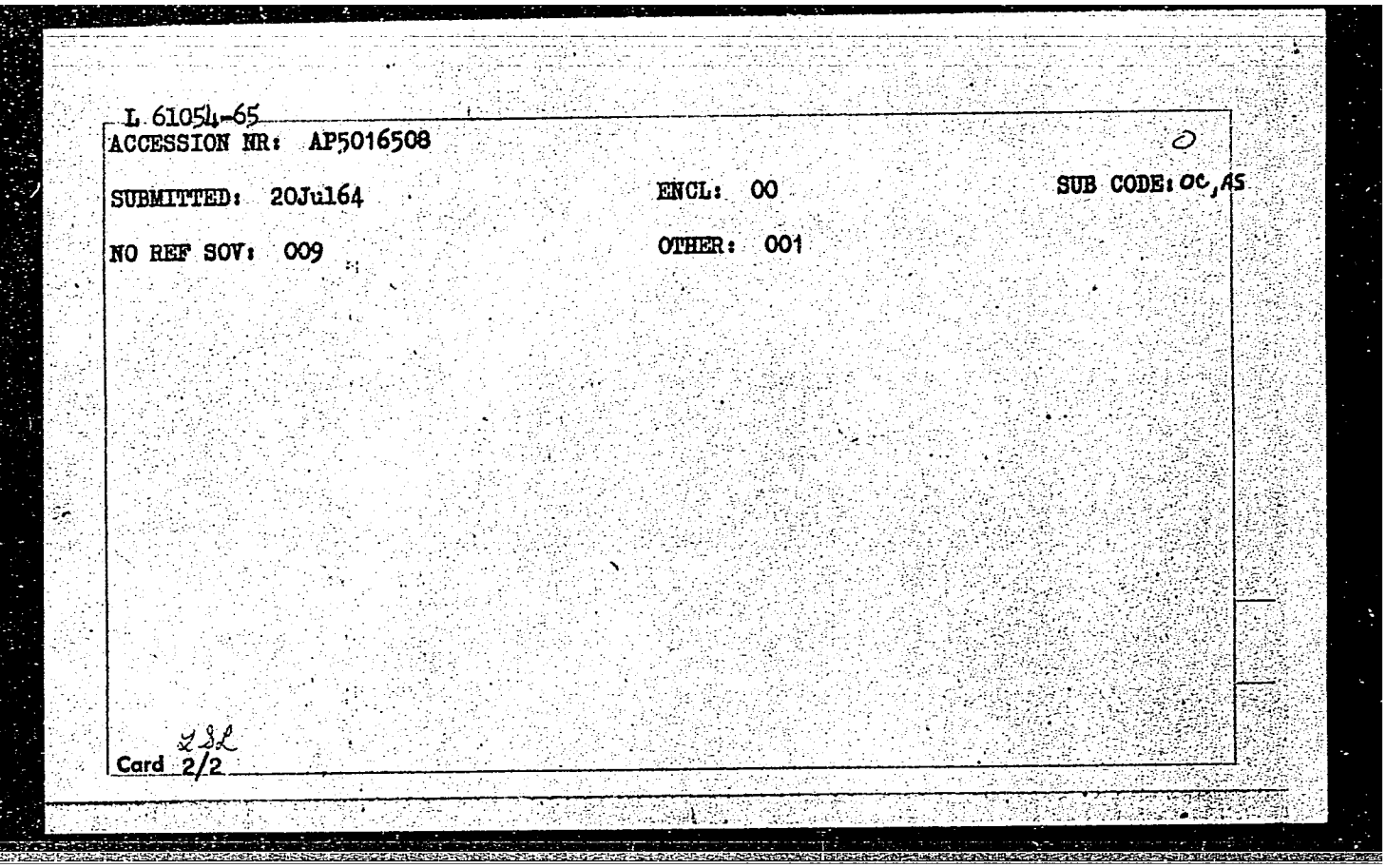
SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 6, 1965, 1045-1050

TOPIC TAGS: polymer, resin, tensile stress, tensile strength, polyacrylonitrile, polymethyl methacrylate, viscose, caprone

ABSTRACT: The longevity of four polymers subjected to static and periodic loading was determined in order to test the validity of the impairment superposition principle. The investigation is an extension of previous work of the authors (Fizika tverdogo tela, 4, 949, 1962). The polymers investigated were: polyacrylonitrile, polymethylmethacrylate, viscose, and caprone. The experimental method is described in the reference above. It is concluded that the impairment superposition principle is valid and that the degradation at static and periodic loads stems from the thermal activation rupture of chemical bonds as suggested by Zhurkov. Orig. art. has: 3 graphs and 4 equations.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe. (Physico-Technical Institute)

Card 1/2

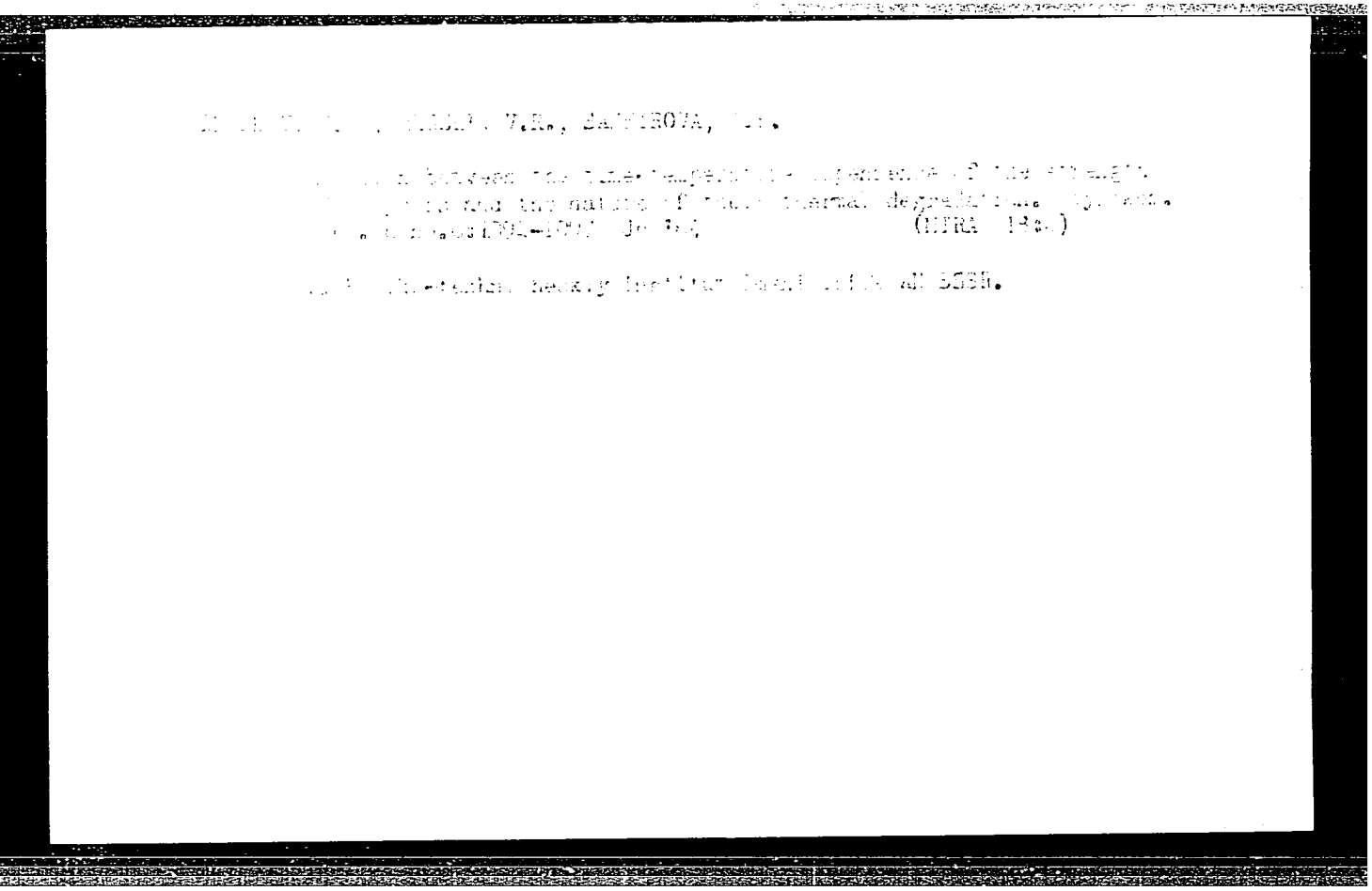


L 61054-65
ACCESSION NR: AP5016508

SUBMITTED: 20Jul64 ENCL: 00 SUB CODE: OC, AS

NO REF SOV: 009 OTHER: 001

Card 2/2



REGEL, V. V.

5

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322/13/5 678.01 :539.219.2

1-4E 2C

Kinetics of Crack Growth in the Fracture of Solids

Zh. tekh. Fiz. 26(2), 359-369 1951

V.V. Regel

U.S.S.R.

The kinetics of growth of surface and penetrating cracks in polymethylmethacrylate specimens containing various amounts of dibutyl phthalate plasticizer have been studied by ciné recording. It is concluded that the time dependence of the strength of plastics is basically connected with the growth, and not the initiation, of cracks. It is pointed out that existing theory based on elasticity theory is unable to explain all the observations, particularly those on a considerable proportion of the lifetime of the specimen during which cracks spread at a decelerating rather than an accelerating rate. The possible alternatives are discussed. Bibl. 9.

(R.A.E. Transl., (614), 10pp., Nov., 1956, U.K.)

NM

REGEL', Ye. D.

Homology of the laminae orbitonasales in amphibia. Dokl. AN SSSR 154 no. 3:728-730 Ja '64. (MIRA 17:5)

1. Zoologicheskiy institut AN SSSR. Predstavleno akademikom I.I.Shmal'gauzenom.

[redacted], Ye.D.

Development of cartilaginous neurocranium and its connection with the palatoquadrate in Hynobius keyserlingii. **Trudy Zool. inst.** 33' 34-74 '64. (MIRA 17:7)

REGEL', Ye.D.

Segmentation traces in the chordal part of the cartilaginous skull of Hynobius kayserlingii. Dokl. AN SSSR 140 no.1:253-255 S-O '61. (MIRA 14:9)

1. Zoologicheskiy institut AN SSSR. Predstavleno akademikom I.I. Shmal'gauzenom.

(Skull) (Salamanders)

REGEL', Ye.D.

Palatoquadratum and its connections with the axial part of the skull in Hynobius kayserlingii. Dokl AN SSSR 142 no.1:237-240 Ja '62. (MIRA 14:12)

1. Zoologicheskiy institut AN SSSR. Predstavleno akademikom I.I. Shmal'gauzenom.
(Amphibia) (Skull)

[illegible], [illegible].

[illegible], [illegible] Y. Kosbiin's Corrosion of Concrete; a book review. p. 514.

Vol. 5, No. 11, Nov. 1955.
[illegible] ITCHNYI SLOVIK.
TECHNICOT
Budapest, Hungary

Sc: East European Accession, Vol. 5, No. 5, May 1956

REGELE, Z.; ACS, E.

Stabilization of rubbish-slag embankment by the Czebertovicz process.
p. 44.
(Melyepitestudomanyi Szemle, Vol. 7, no. 1/3, Jan./Mar. 1957. Budapest, Hungary)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 9, Sept. 1957. Uncl.

REGELE, Z.

Testing the chemical stabilization of loess soils. p. 228.

MELYEPITESTUDOMANYI SZEMLE. (Kozlekedes- es Kozlekedesepitestudomanyi Egyesulet) Budapest, Hungary, Vol. 9, no. 5, May 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 8, August 1959.
Uncla.

REGELE, Z.

2

88. **Grouting with quick-setting cement.** Z. Regele, M. Gyenge. *Mélyépítéstudományi Szemle*. Vol. 6, 1956, No. 1, pp. 9—20, 12 figs., 4 tabs.

Maths

In the construction of the Budapest underground railway blast furnace slag grout was used for grouting rear voids. The grout however penetrated far into the soil due to the high water-cement ratio and to the delayed setting. The method therefore did not yield good results neither from the viewpoint of filling voids nor from that of water sealing, moreover it proved very unecomonical. Grouting with a suspension of bentonite appeared to be adequate for granular soils whereas suspensions of aluminous and Portland cement were used to advantage in fissured, cohesi e soils for reducing the setting time. Relations between the mixing ratio of various cements and the water-cement ratio have been determined by laboratory investigations. The chemical process of and the part played by the setting cement mix in the course of grouting are being studied. A completed work and experiences gained in the process are described. As compared with the old method a saving of 15 to 40% can be obtained by the new one due to reduced material and labour requirements. The recording of changes in the grouting pressure is of decisive importance. In this connection the evalution of pressure curves and the teclinological methods required by quick setting in the course of grouting are dealt with in detail. The method has been successfully applied in fissured, cohesive soil, the rapid development of the cement plugs resulted in complete water-sealing and filling of the cracks with a small consumption of material.

REMEN, L.

Injection with fast binding cement. P. 9 MELYEPITESTUDOMANYI SZEMLE (Kozlekedesi Kiado) Budapest Vol. 6, no. 1, Jan 1956

SOURCE: EAL IC Vol. 5, no. 7, July 1956

KEGELE Z

84. Practical experiences gained in the field of soil freezing at one of the work sites of the Budapest Underground Railway — E. Széchy Jr., Z. Regele. (*Mélyépítéstudományi Szemle* — Vol. 5, 1955, No. 6, pp. 260—272, 16 figs.)

GP

At one of the work sites of the Budapest Underground Railway the soil consisted of sandy gravel to a depth of 12 m below the surface, underlying grayish and yellowish clay interwoven with sand pockets and sandstone, and a 12 m thick stratum of quicksand. These extremely poor soil conditions rendered necessary the application of an entirely new compressed air working method combined with soil freezing. The method of construction, the spread, effectiveness and costs of freezing, and experiences gained are described in detail. It was found that the effect of compressed air work increased cold losses by approx. 10% and that the temperature of the work site was reduced to a minimum of 1·3 to 4° C by the freezing process. In spite of the extraordinary conditions the health of the workers did not suffer and neither did the number of "bends" cases increase which proved the effectiveness of preventive measures.

(1)

REGELE, Zoltan, okleveles mernok

Electrosilicatization and its application in Hungary. Melyepitestud szemel 14 no.6:273-282 Je '64.

1. Division Chief, Geodetic and Soil Testing Enterprise.

Rerele, Z.; Balazsi, B.

Increasing the load capacity of piles by soil stabilization. p.413

MELYEPITESTUDOMANYI SZEMLE. (Kozlekedes-es Kozlekedesepitestudomanyi Egyesulet)
Budapest, Hungary. Vol.9, no.9, September 1959

Monthly List of East European Accessions (EEAI) LC, Vol.8, no.11
November 1959
Uncl.

KOGELE, Zoltan, okleveles mernok

An interesting application of soil stabilization by chemicals.
Melyepitestud szemle 11 no.3:133-135 Mr '61.

1. Foldmero es Talajvizsgalo Vallalat szakosztalyvezetoje.

URETSKAYA; VISHNYAKOVA; BORISOV; PINKHASOVICH; MURADOV; REGEL'MAN; OSERSKIY; PYATOV; BOKSERMAN; GORPISHCHENKO; YEREMENKO; ZHARKOV; POPOV; ROMANOVA; SIDORENKO; TODRIN; TIMOVEYEVA.

Dmitrii Sergeevich Pavlov; obituary. Gaz. prom. no.1:56 Ja '58.
(Pavlov, Dmitrii Sergeevich, 1904-1957) (MIRA 11:2)

RUDEL'MAN, Kh. Z., Cand Tech Sci -- "Study of the vibrations of a bobbin-holder and the performance of the spreader of a glass-spinning unit." Mos, 1960 (Min of Higher and Secondary Specialized Education RSFSR. Mos Textile Inst) (KL, 1-61, 196)

REGEL'MAN, Kh. Z.

Head jigging stenter mechanism of the PTS-250-I5 centrifugal spinning machine. Khim. volok. no.6:39-41 '62. (MIRA 16:1)

1. Leningradskiy tekstil'nyy institut.

(Spinning machinery)

[redacted], A. I.

Redesigned drive for the funnels of the centrifugal spinning machine for viscose silk. Tekst. prom. no.3:123-128 '62. (MIRA 17:3)

1. Leningradskiy tekstil'nyy institut imeni Kirova.

REGEL'MAN, Kh.Z., inzh.

Vibration measurement by means of high-speed cinematography.
Tekst.prom. 20 no.2:59-61 F '60. (MIRA 13:6)
(Motion-picture photography, high-speed)
(Textile machinery--Vibration)

[redacted], kand. tekhn. nauk, dotsent; CHISTOSERDOV, V.V., [redacted], kand. tekhn. nauk

Book review. Tekst. prom. 25 no.7:76-79 Jl '65. (MIRA 18:8)

1. Leningradskiy institut tekstil'noy i legkoy promyshlennosti imeni Kirova.

REGEL'MAN, Kh.Z.

Critical speed and self-centering of bobbin holders on glass weaving machines. Izv.vys.ucheb.zav.; tekh.tekst.prom. no.1:158-167 '59. (MIRA 12:6)

1. Leningradskiy tekstil'nyy institut im. S.M.Kirova.
(Glass fibers) (Textile machinery)

REGEL'MAN, Kh.Z.

Determining the efficiency of SPA-6-C glass spinning machinery.
Izv.vys.ucheb.zav.; tekh.tekst.prom. no.2:145-152 '59.
(MIRA 12:6)

1. Leningradskiy tekstil'nyy institut im. S.M.Kirova.
(Glass fibers)
(Spinning machinery)

REGEL'MAN, Kh.Z.

Experimental study of the oscillations of the bobbin holder of a glass filament spinning unit. Izv. vys. ucheb. zav.; tekh. teks. prom. no. 2:136-143 '61. (MIRA 14:5)

1. Leningradskiy tekstil'nyy institut imeni S.M. Kirova.
(Glass fibers)
(Spinning machinery)

REGEL'MAN, M.A.; KHALIF, A.L.; KHUSAINOV, B.Kh.

Preparation of isopentane in an isobutane column. Gaz.prom. 6 no.3:45-47 '61. (MIRA 14:3)

(Butane) (Propane)

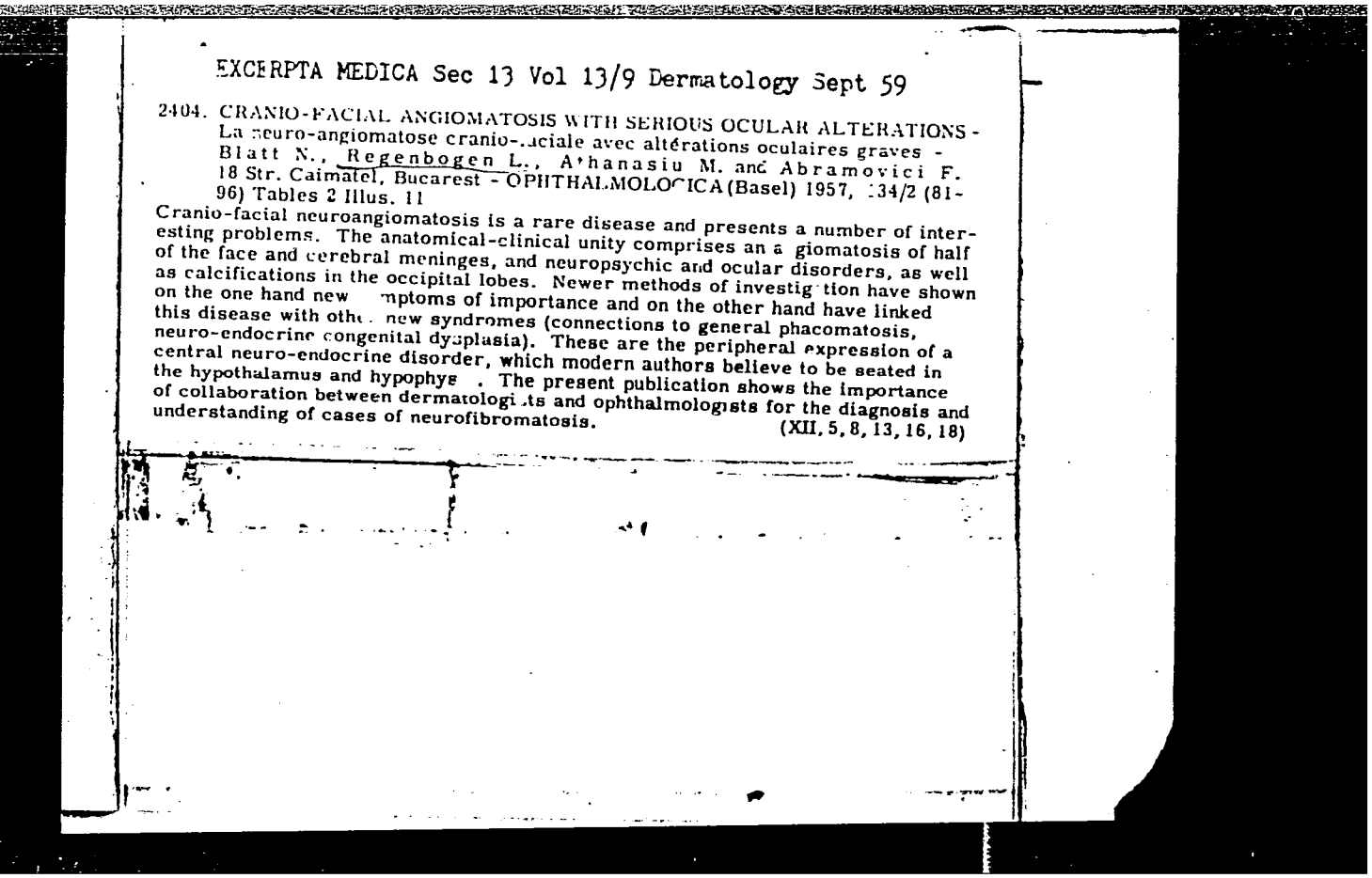
YESYUTIN, Leonid Sergeyevich; BUSHIN, V.P., retsenzent; ZOTOV, V.A., retsenzent; MEDVEDEV, P.I., retsenzent; EYZERMAN, V.L., retsenzent; REGEL'SON, L.M., kand. tekhn. nauk, dots., red.; DOZORTSEVA, Ch.I., red.

[Elements of antenna and wave-guide systems] Elementy antenno-volnovodnykh ustroistv. Moskva, Izd-vo Mosk. univ., 1964. 102 p. (MIRA 17:11)

REGEL'SON, Lev Moiseyevich; AZ'YAN, Yu.M., dots., red.; LAZAREVA, L.V., tekhn. red.

[Analysis of the operation of a blocking oscillator] Analiz raboty bloking-generatora. Moskva, Izd-vo Mosk. univ. 1963. 146 p. (MIRA 16:7)

1. Moskovskiy gosudarstvennyy universitet (for Az'yan).
(Oscillators, Electron-tube)
(Oscillators, Transistor)



EXCERPTA MEDICA Sec 13 Vol 13/9 Dermatology Sept 59

2404. CRANIO-FACIAL ANGIOMATOSIS WITH SERIOUS OCULAR ALTERATIONS - La neuro-angiomatose cranio-faciale avec altérations oculaires graves - Blatt N., Regenbogen L., Athanasiu M. and Abramovici F. 18 Str. Caimatel, Bucarest - OPHTHALMOLOGICA (Basel) 1957, 134/2 (81-96) Tables 2 Illus. 11

Cranio-facial neuroangiomatosis is a rare disease and presents a number of interesting problems. The anatomical-clinical unity comprises an angiomatosis of half of the face and cerebral meninges, and neuropsychic and ocular disorders, as well as calcifications in the occipital lobes. Newer methods of investigation have shown on the one hand new symptoms of importance and on the other hand have linked this disease with other new syndromes (connections to general phacomatosis, neuro-endocrine congenital dysplasia). These are the peripheral expression of a central neuro-endocrine disorder, which modern authors believe to be seated in the hypothalamus and hypophyse. The present publication shows the importance of collaboration between dermatologists and ophthalmologists for the diagnosis and understanding of cases of neurofibromatosis. (XII, 5, 8, 13, 16, 18)

R EGENBOGEN

2284. BLATT N., REGENBOGEN L., ATHANASIU M. and ABRAMOVICI F.
*Neuro-angiomatoză cranio-facială cu grave alterații oculare. Encephalo-facial neuro-angiomatosis with severe ocular alterations
DERM.-VENEROL. (Bucuresti) 1957, 2/2 (140-152) Tables 1 Illus. 110

Encephalo-facial-neuro-angiomatosis is a rare disease which brings up most interesting problems from the dermatological and ophthalmological point of view. As a rule classified within the group of phacomatoses, it may be integrated into a larger sphere among the congenital neuro-endocrine dysplasias and seems to be the peripheral expression of a neuro-endocrine disturbance. The authors present and interpret an original case of neuro-angiomatosis exhibiting: naevus flammeus of the left side of the face with a haemangioma of the upper maxillary, cranio-facial homolateral hemihypertrophy, angiomatous invasion of the left maxillary sinus, conjunctival and choroidal angiomatosis associated to detachment of the retina and low intra-ocular pressure. The case also presents cranial hyperostotic thickenings, intra-ocular calcifications and an altered aspect of the sella turcica region. The problems which have arisen in connection with the interpretation of this case show the necessity of a collaboration between the dermatologist and oculist as regards any case of encephalo-facial neuro-angiomatosis.

(XIII, 8, 12, 18)

[redacted], M.[redacted].

[redacted]-day technology of the refinement of casing-head gas.
Gaz.prom. 10 no.3:36-39 '65. (MIRA 18:5)

83409

V/003/60/000/008/[illegible]/003
B015/B058

5.3831

AUTHORS: Kamenár, Štefan, Candidate of Chemical Sciences, Šimek, Ivan, Engineer, Regensbogenová, Eva, Engineer (Bratislava)

TITLE: Copolymerization of 2-Vinyl Furan With Vinylidene Chloride. Determination of the Copolymerization Parameters

PERIODICAL: Chemické zvesti, 1960, No. 8, pp. 581-589

TEXT: The copolymerization of the two monomers 2-vinyl furan and vinylidene chloride was investigated by determining the copolymerization parameters according to the adapted integrated form of the copolymerization equation. The molar composition of the mixture of the monomers was altered from 0 to 1, and the amount of the non-reacted monomer was determined by the Zacherle-Krainick method (Ref. 34) (Tables 1, 2). The numerical calculation of the parameters was carried out by the method of least squares (Table 3), and the values $r_1 = 11.7 \pm 0.07$ and $r_2 = 0.15 \pm 0.014$ were obtained. A correlation with the rule by Kh. S. Bagdasaryan (Ref. 35) was observed. There are 4 figures, 3 tables, and

Card 1/2

83409

Copolymerization of 2-Vinyl Furan With Vinylidene Chloride. Determination of the Copolymerization Parameters

V/003/60/000/[illegible]
B015/B058

35 references: 3 Soviet, 11 US, 2 French, 3 German, 5 Czechoslovakian, 1 Swedish, 1 Swiss, and 2 Japanese.

ASSOCIATION: Katedra organickej technológie Slovenskej vysokej školy technickej v Bratislave (Chair of Organic Technology of the Slovakian Technical College in Bratislava)

SUBMITTED: March 8, 1960

Card 2/2

REGEL'SON, Lev Moiseyevich;NIKULIN, S.M., red.; SHIROKOVA, M.M., tekhn. red.

[Blocking oscillator] Bloking-generator. Moskva, Gos. energ.izd-vo, 1961. 70 p. (Massovaia radiobiblioteka no.419). (MIRA 14:11)
(Oscillators, Electron-tube)

[illegible]

Measurement of the zero-sequence current distribution in a transmission line. Periodica polytechn electr [illegible] vol. 4 1295 317 [illegible].

[illegible] Dept. of Electric Power Plants, Polytechnical University, Budapest [illegible]. 2. Research Institute of the Post Office, Budapest [illegible]. Presented by Prof. Dr. [illegible].

ELEK, Tibor, prof., dr. (Budapest, XI., Muegyetem rakpart 3); REGENI, Gizella, dr. (Budapest, XI., Muegyetem rakpart 3)

Problems of training scientific cadres at Budapest Technical University. Periodica polytechn eng 8 no.1:77-85 '64.

1. Mitglied, Redaktionskollegium, "Periodica Polytechnica-Engineering", (for Elek). Submitted November 12, 1963.

SEBO, Istvan, okleveles villamosmernok, egyetemi tanarseged; REGENI, Laszlo, dr., okleveles gepeszmernok, a muszaki tudomanyok kandidatusa.

Measuring the zero-sequence current intensity distribution on transmission lines. Elektrotechnika 56 no.3:119-132 Mr '63.

1. Orszagos Villamos Tavvezetek Vallalat munkatarsa; Budapesti Muszaki Egyetem Villamosmuvek Tanszek, Budapest, XI., Egry Jozsef u.18. (for Sebo). 2. Posta Kiserleti Intezet tudomanyos osztalyvezetoje, Budapest, IX., Zombori u.2. (for Regeni).

REGENSTREIF, A.

TECHNOLOGY

Periodicals: CELULOZA SI HIRTIE. Vol. 7, No. 6, June 1958

REGENSTREIF, A. Harvesting on the floating reed islets. p. 251.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 2, February 1959, Unclass.

RUMANIA/General and Specialized Zoology - Insects. F.

Abs Jour : Ref Zhur - Biol., No 9, 1958, 40027

Author : Niculescu, E., Konig, Fr., Auslander, D., Regenstreif, M.
Inst : -
Title : The Morphologic and Ecologic Study of the Larva, Pupa and Imago.

Orig Pub : Byul. stiint. Acad. RPR. Scc. biol. si stiinte agric., 1956, 8, No 3, 599-630.

Abstract : A detailed morphologic description (with many sketches) of the moth Ch. palustris and its way of life are given. The ecology of the larvae and the variety in their behavior depending on the nature of the moisture of the soil on which their feeding plants grow, are given.

Card 1/1

REGENT, I.

Yugoslavia (430)

General - Serials

Centenary of the Communist Manifesto. p. 241. NOVI SVET (Drzavna zalozba Slovenije) Ljubljana. (Monthly for literature and arts). Vol. 3, 1948.

East European Accessions List, Library of Congress Vol. 1, no 13, November 1952
UNCLASSIFIED.

REGENT, I.

Yugoslavia (430)

General - Serials

The 31st anniversary od the October Revolution. p. 809. NOVI SVET (Drzavna zalozba Slovenije) Ljubljana. (Monthly for literature and arts). Vol. 3, 1948.

East Eureopean Accessions List. Library of Congress, Vol. 1, no 13, November 1952. UNCLASSIFIED.

(A)L 00518-66 EWT(d)/FBD/FSS-2/EEC(k)-2/EED-2/EWA(c) BC

ACCESSION NR: AP5020882 PO/0082/65/000/07-/0068/0074

AUTHOR: Furtak, Marian (Lieutenant commander, Master engineer); Regent, Jerzy (Master of arts)

TITLE: The acoustic field of a ship and the homing of torpedoes

SOURCE: Przeglad morski, no. 7-8, 1965, 68-74

TOPIC TAGS: torpedo, sound wave propagation, underwater acoustics, underwater weapon, underwater to surface missile

ABSTRACT: The aiming of conventional torpedoes and its shortcomings are discussed, as well as the principle of operation of a homing torpedo. The two types of torpedoes are compared with respect to their likelihood of hitting a target. Two types of homing torpedoes are then discussed in detail. The laws governing the propagation of sound waves in water are considered, as well as the dependence of the refraction of sound waves on their distance from a source. The acoustic field due to a ship's propeller is discussed, and a curve of the mean acoustic pressure as a function of the sound spectrum frequency recorded 50 meters from a ship is shown. The distribution of the acoustic pressure with distance from the source, the frequency dependence of the attenuation coefficient of

Card 1/2

T. 00578-66

ACCESSION NR: AP5020882

6

acoustic pressure, and the principle of measuring the acoustic pressure are discussed. The homing system of an acoustic passive torpedo is described and its schematic diagram is given. A magnetostrictive acoustic receiver and its directivity pattern are described. The principle of operation of a passive homing torpedo as used by the Germans in 1943 is also described. Orig. art. has: 8 figures and 9 formulas.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00 SUB CODE: MS, GP

NO REF SOV: 000 OTHER: 000

Card 2/2

REGENTOV, T.P., inzh.; KOPIN, A.I., inzh.

Projection indicator with an increased scale for media pressure indications. Energetik 11 no. 12:14-15 D '63. (MIRA 17:5)

BRYUKVIN, V.A., inzh.; REGENTOV, T.P., inzh.

Apparatus for electromagnetic treatment of water. Energetik 11 no.11:14-15 N '63. (MIRA 16:11)

REGENTOV, V.A.

Incidence of pyodermitis among workers of a suburban state farm as related to working conditions. Trudy LSGMI 45:263-266 '58
(MIRA 11:11)

1. Kafedra kzhnykh i venericheskikh zabolevaniy Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav. kafedroy prof. A.D. Troitskaya).
(SKIN--DISEASES)
(AGRICULTURAL LABORERS--DISEASES AND HYGIENE)

LEVIN, M.G.; ROMANKOV, P.G.; PASHNIKOVSKAYA, N.B.

Structural viscosity of paste-like materials. Zhur. prikl. khim. 37 no.6:1279-1284 Je '64. (MIRA 18:3)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

KODIN, G.S.; REGER, G.P.

Single production line in distilling alcohol from sugarbeet molasses at the Dzhambul Distilling Combine. Spirt. prom. 27 no.6: 40-42 '61. (MIRA 14:9)
(Dzhambul--Distilling industries--Equipment and supplies)

REGI, A.

"Once more about the calculation ofprime cost on collective farms."

p. 534 (Sotsialistlik Pollumajandus) Vol. 12, no. 12, Dec. 1957
Tallinn, Estonia

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4, April 1958

REGIDA, P.

Milling high-grade corn flour in the Georgiyevsk mills of the Stavropol Procurement Agency. Muk.-elev. prom. 27 no.10:8-11 O '61. (MIRA 14:12)

1. Glavnyy tekhnolog Upravleniya mukomol'no-krupyanoy i kombikormovoy promyshlennosti Ministerstva zagotovok RSFSR. (Georgiyevsk--Corn milling)

REGIDA, P.; MEL'NIKOV, M.; KUZNETSOV, M.

Producing several types of milled corn products at low-capacity mills. Muk.-elev. prom. 28 no.8:15-17 Ag '62. (MIRA 17:2)

1. Vserossiyskoye ob"yedineniye khleboproduktov.

REGIDA, P., inzh.

Using grooves with various angles in milling high-grade flour.
Muk.-elev. prom. 25 no.5:17-19 My '59. (MIRA 12:8)

1.Glavnoye upravleniye mukomol'noy, krupyanoy i kombikormovoy promyshlennosti Ministerstva khleboproduktov RSFSR.
(Grain-milling machinery)

REGIDA, P.

Vertical machine for finishing bran. Muk.-elev.prom. 26 no.1: 22-23 Ja '60. (MIRA 13:6)

1. Starshiy tekhnolog Glavnogo upravleniya Mukomol'no-krupyanoy i kombikormovoy promyshlennosti Ministerstva khleboproduktov RSFSR.
(Flour mills--Equipment and supplies)

REGIDA, P.; MEL'NIKOV, M.; KUZNETSOV, M.

Separating corn germs at feed mills. Muk.-elev. prom. 28 no.10:8 O '62. (MIRA 16:1)

1. Vserossiyskoye ob"yedineniye khleboproduktov.
(Feed mills) (Corn (Maize))

REGIDA, P.

Adjusting milling machinery for low quality grain. Muk. elev. prom. 23 no.12:27 D '57. (MIRA 11:2)

1. Glavnoye upravleniye mukomol'no-krypyanoy i kombikormovoy promyshlennosti Ministerstva khleboproduktov RSFSR.
(Grain milling)

REGINAC, Ladislav

"What is that?" by [Dr.Ing.] Alfred Schwankl. Reviewed by Ladislav Reginac. Drevo 19 no.6:3 of cover Je '64.

REGINSKIY, M. I.

Railroad cars manufactured at the Leningrad Egorov Plant. Biul. tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch. i tekh.inform. no.10:65-67 '62. (MIRA 15:10)

(Leningrad—Railroads—Cars)

REGINSKIY, M.I.

The 22 sb all-metal mail car. Biul.tekh.-ekon.inform. no.9:75-76 '61. (MIRA 14:9)

(Railway mail service--Cars)

CHERNYSHEV, M.P.; ROZHKOV, L.P.; SHUL'GINA, Ye.F.; IGNATOVICH, A.F.; LABUNSKAYA, L.S.; FOMINA, T.V.; CHERNYAKOVA, A.P.; SHPAKOVA, L.N.; TARASOVA, M.K.; ANFILATOVA, A.I.; SLAVIN, L.B.; BARYSHEVSKAYA, G.I.; DERIGLAZOVA, N.V.; MATUSHEVSKIY, G.V.; AL'TMAN, E.N.; KROPACHEV, L.N.; CHEREDILOV, B.F.; POTAPOV, A.T.; DUDCHIK, M.K.; REGENTOVSKIY, V.S.; YERMAKOVA, L.F.; SEMENOVA, Ye.A.; KULIKOVSKIY, I.I.; KIRYUKHIN, V.G.; AKSENOV, A.A., red.; NEDOSHIVINA, T.G., red.; SERGEYEV, A.N., tekhn. red.; BRAYNINA, M.I., tekhn. red.

[Hydrometeorological handbook of the Sea of Azov] Gidrometeorologicheskii spravochnik Azovskogo moria. Pod red. A.A.Aksenova. Leningrad, Gidrometeoizdat, 1962. 855 p. (MIRA 16:7)

1. Gidrometeorologicheskaya observatoriya Chernogo i Azovskogo morey.

(Azov, Sea of--Hydrometeorology)

REGINSKIY, A.N.; KHODAREV, N.N.; KRAMER, A.A.

Scanning of the kidneys with Hg^{203}-labelled neohydrine; an experimental study. Med. rad. 10 no.9:47-50 S '65.
(MIRA 18:10)

1. Institut meditsinskoy radiologii (zav. laboratoriyev - prof. M.N. Fateyeva) i Institut terapii (zav. otdeleniyem - prof. N.A.Ratner) AMN SSSR. Moskva.

REGINSKIY, A.N.

Investigation of the thyroid gland with a scanner (scintigraphic card) of the MB-7101 (B-16-1-A) gamma P-511 type (Hungarian make) with a preliminary selection of optimal conditions on phantoms. Med. rad. 8 no.7:12-16 Jl '63. (MIRA 17:1)

1. Iz Instituta meditsinskoy radiologii AMN SSSR.

LOGINOV, A.S.; FATEYEVA, M.N.; REGINSKIY, A.N.

Experience in the combined use of radioisotope scanning and laparoscopy in the diagnosis of liver diseases. Med. rad. 9 no.3:37-47 Mr '64. (MIRA 17:12)

1. Institut meditsinskoy radiologii AMN SSSR i Institut terapii AMN SSSR, Moskva.

LOGINOV, A.S.; REGINSKIY, A.N.

Radioisotope scanning and laparoscopy in the diagnosis of liver diseases. Akt.vop.pat.pech. no.3:61-78 '65. (MIRA 18:11)

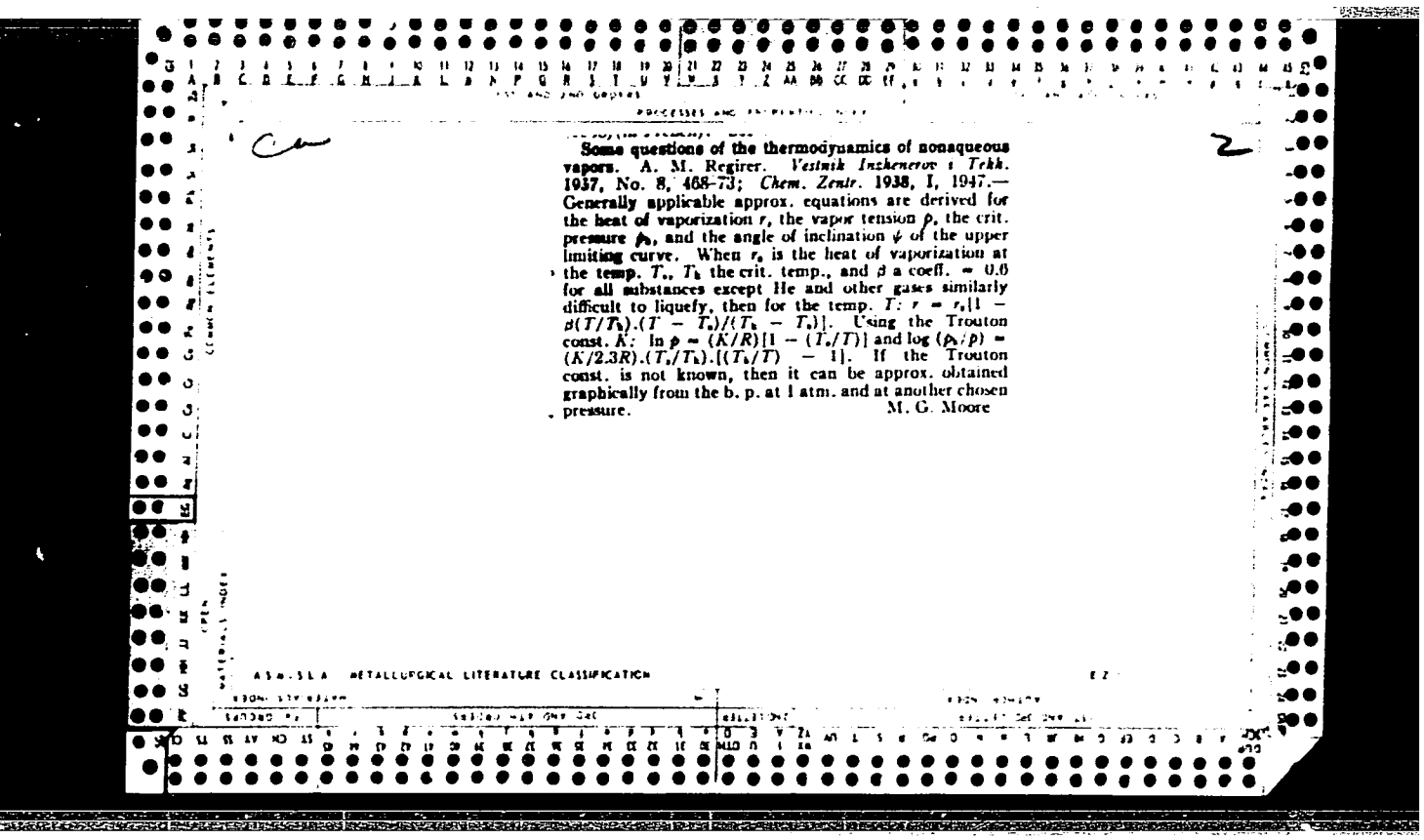
SMIRNOVA, G.A., aspirant; SHCHERBAKOVA, M.N.; BOGACHEVA, V.I.; REGINYA, V.P.

Economic efficiency of the manufacture of nonwoven fabrics. Tekst. prom. 25 no.8:50-51 Ag '65. (MIRA 18:9)

1. Leningradskiy institut tekstil'noy i legkoy promyshlennosti imeni Kirova (for Smirnova). 2. Leningradskiy nauchno-issledovatel'skiy institut tekstil'noy promyshlennosti (for Shcherbakova). 3. Nachal'nik tekhnicheskogo otdela fabriki "Lensukno" (for Bogacheva). 4. Zaveduyushchiy apparatno-pryadil'nym proizvodstvom fabriki "Lensukno" (for Reginya).

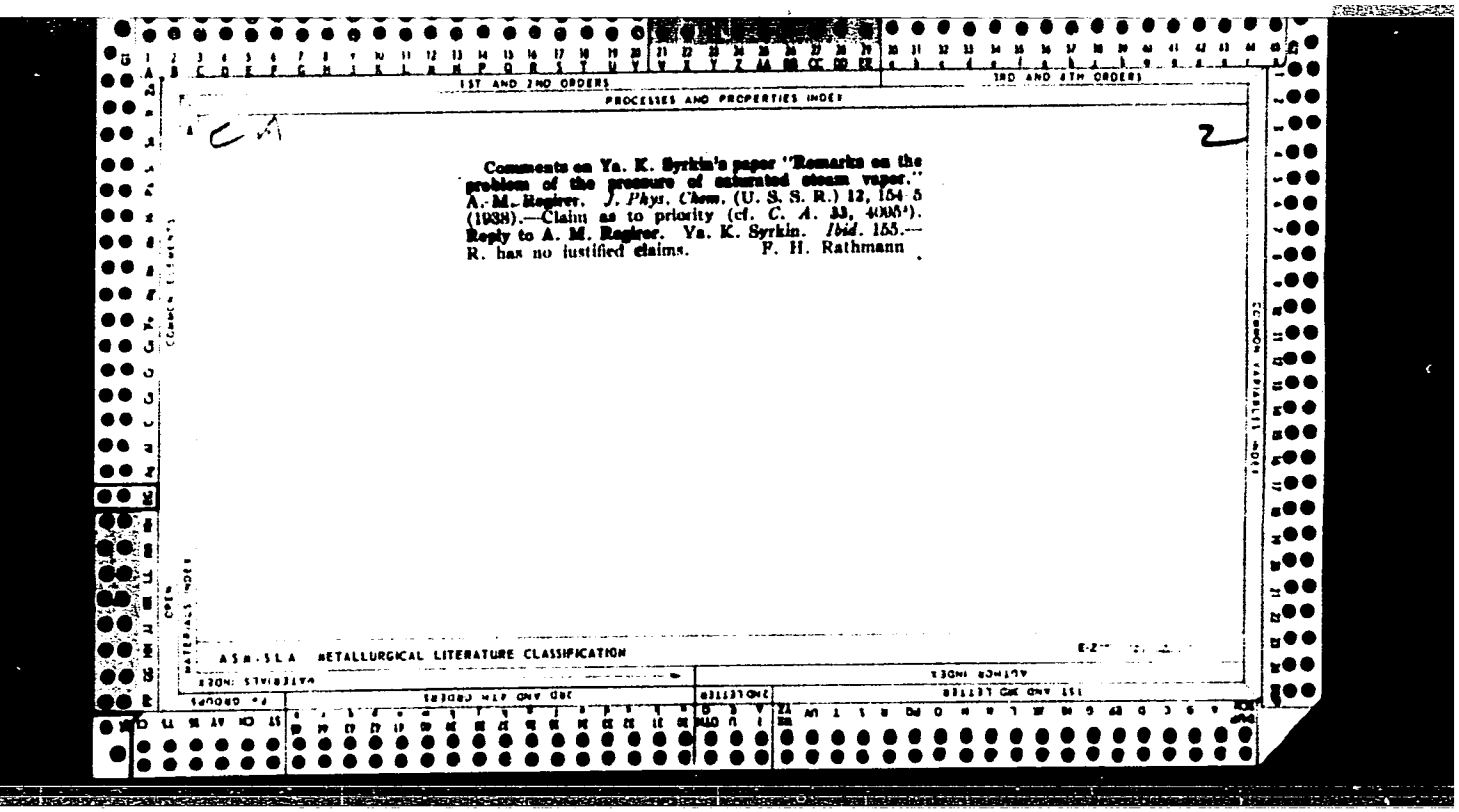
GORELIK, Boris Isaakovich; REGINYA, L., red.; KODANEV, P., tekhn.red.

[Over northern roads] Po dorogam severa. Syktyvkar, Komi knizhnoe izd-vo, 1957. 71 p. (MIRA 12:1)
(Komi A.S.S.R.--Description and travel)



Some questions of the thermodynamics of nonaqueous vapors. A. M. Regirer. *Vestnik Inzhenerov i Tekh.* 1937, No. 8, 468–73; *Chem. Zentr.* 1938, I, 1947.—Generally applicable approx. equations are derived for the heat of vaporization r, the vapor tension p, the crit. pressure p_k, and the angle of inclination ψ of the upper limiting curve. When r_0 is the heat of vaporization at the temp. T_0, T_k the crit. temp., and β a coeff. = 0.6 for all substances except He and other gases similarly difficult to liquefy, then for the temp. T: $r = r_0[1 - \beta(T/T_k).(T - T_0)/(T_k - T_0)]$. Using the Trouton const. K: $\ln p = (K/R)[1 - (T_0/T)]$ and $\log (p_k/p) = (K/2.3R).(T_0/T_k).[(T_k/T) - 1]$. If the Trouton const. is not known, then it can be approx. obtained graphically from the b. p. at 1 atm. and at another chosen pressure.

M. G. Moore



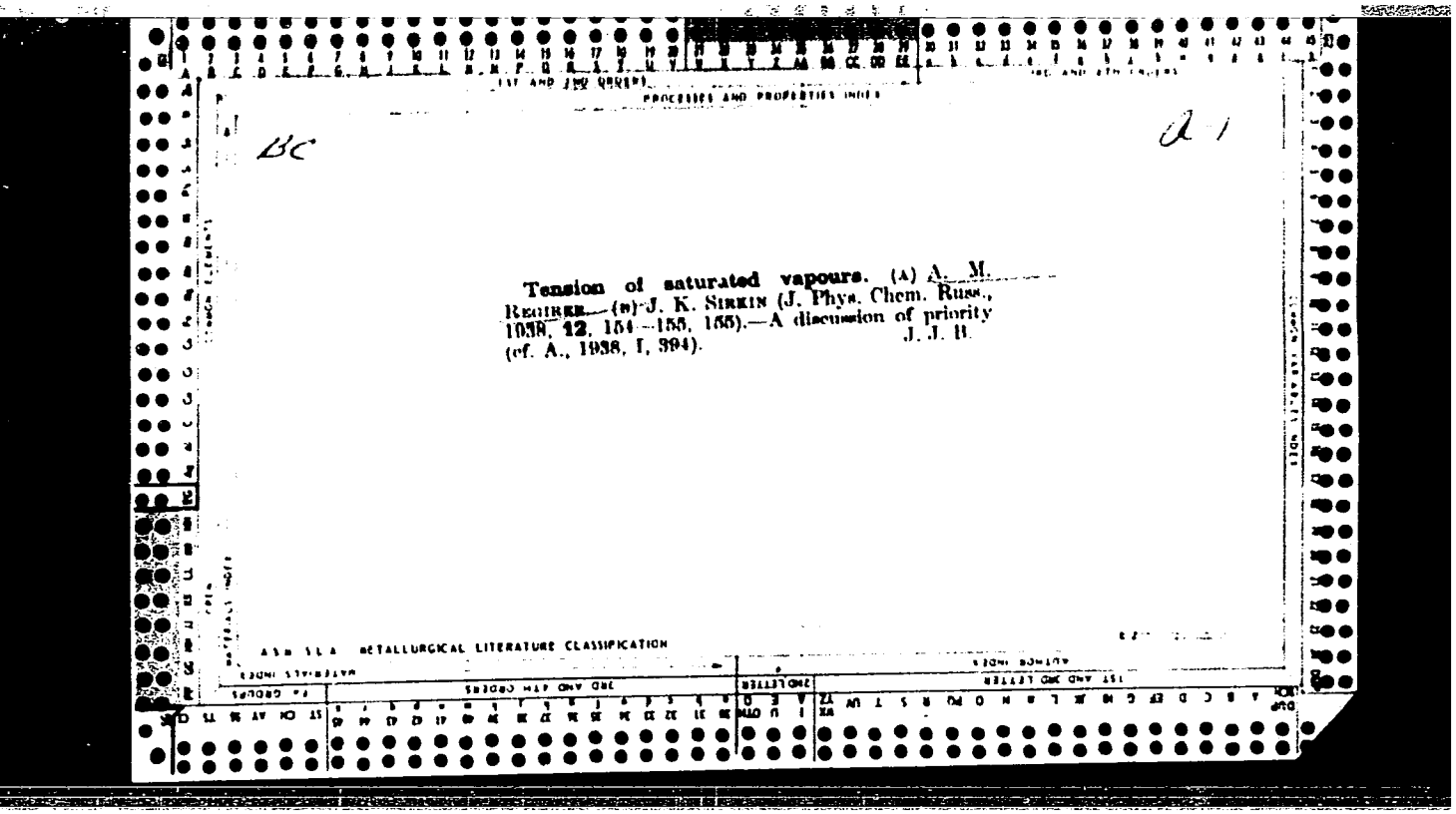
1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

Comments on Ya. K. Syrkin's paper "Remarks on the problem of the pressure of saturated steam vapor." A. M. Rogiver. *J. Phys. Chem.* (U. S. S. R.) **12**, 154-5 (1938).—Claim as to priority (cf. *C. A.* **33**, 4005[1]). **Reply to A. M. Rogiver.** Ya. K. Syrkin. *Ibid.* 155.—R. has no justified claims. P. H. Rathmann

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



BC

A 1

Tension of saturated vapours. (A) A. M. REGUIRER.—(B) J. K. SIRKIN (J. Phys. Chem. Russ., 1938, **12**, 154–155, 155).—A discussion of priority (cf. A., 1938, I, 394). J. J. B.

USSR/Chemistry - Deformation of Colloidal Systems Mar/Apr 52

"The Theory of X-Ray Cinematic Analysis of the Trajectories of Motion of Easily Deformable Colloids and of Coarsely Dispersed Systems," T. Ya. Gorazdovskiy, S. A. Regirer, Chair of Phys, Moscow Inst of Chem Machinery Bldg

"Kolloid Zhur" Vol XIV, No 2, pp 85-92

Analytic theory for obtaining trajectories of motion of particles of media being deformed is shown by a 3-dimensional curve corresponding to 2 central projections obtained in the form of X-ray pictures. Projections can be obtained by

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REGIRER, S. A.

2 methods: displacing the X-ray tube or displacing the object being studied. Explains the methods and their theory. Gives formulas for detg the coordinates and eqs of the curve in 2 adjacent central projections. The 2 above methods are not equiv, and sep formulas are given for each case. Indicates physical and mathematical methods of finding unique solns.

216T10

REGIRER, S.A.

5

(2)

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
General and Physical Chemistry

Theory of the röntgenokinematic analysis of the path of movement of easily deformable colloidal and coarsely dispersed systems. T. Ya. Gorazdovskiĭ and S. A. Reginer. *Colloid J. (U.S.S.R.)* 14, 93–100(1952)(Engl. translation). —See C.A. 46, 5933a. H. L. H.

11-9-54

GORAZDOVSKIY, T.Ya.; REGIRER, S.A.

Motion of Newtonian liquids between rotating coaxial cylinders in the presence of internal thermal processes affecting viscous properties. Zhur.tekh.fiz.26 no.7:1532-1541 Jl '56. (MLRA 9:9)
(Viscosimetry)

USSR/Physical Chemistry - Liquids and Amorphous Bodies. Gases, B-6

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 307

Author: Gorazdovskiy, T. Ya., and Regirer, S. A.

Institution: None

Title: Motion of a Newtonian Liquid Between Two Rotating Coaxial Cylinders in the Presence of Internal Heat Processes Affecting the Viscous Properties

Original Periodical: Zh. tekhn. fiziki, 1956, Vol 26, No 7, 1532-1541

Abstract: It was found that during the investigation of the viscosity of liquids with the rotational viscosimeter strong initial heating of the liquid could be observed; this heating altered the rheological properties of the liquid under investigation. Starting with the basic differential equations describing the motion of a viscous liquid, the authors have solved the problem of the flow and heat exchange in a viscous layer between 2 rotating coaxial cylinders of infinite length, taking into account the dissipation of energy, heat conductivity, and the

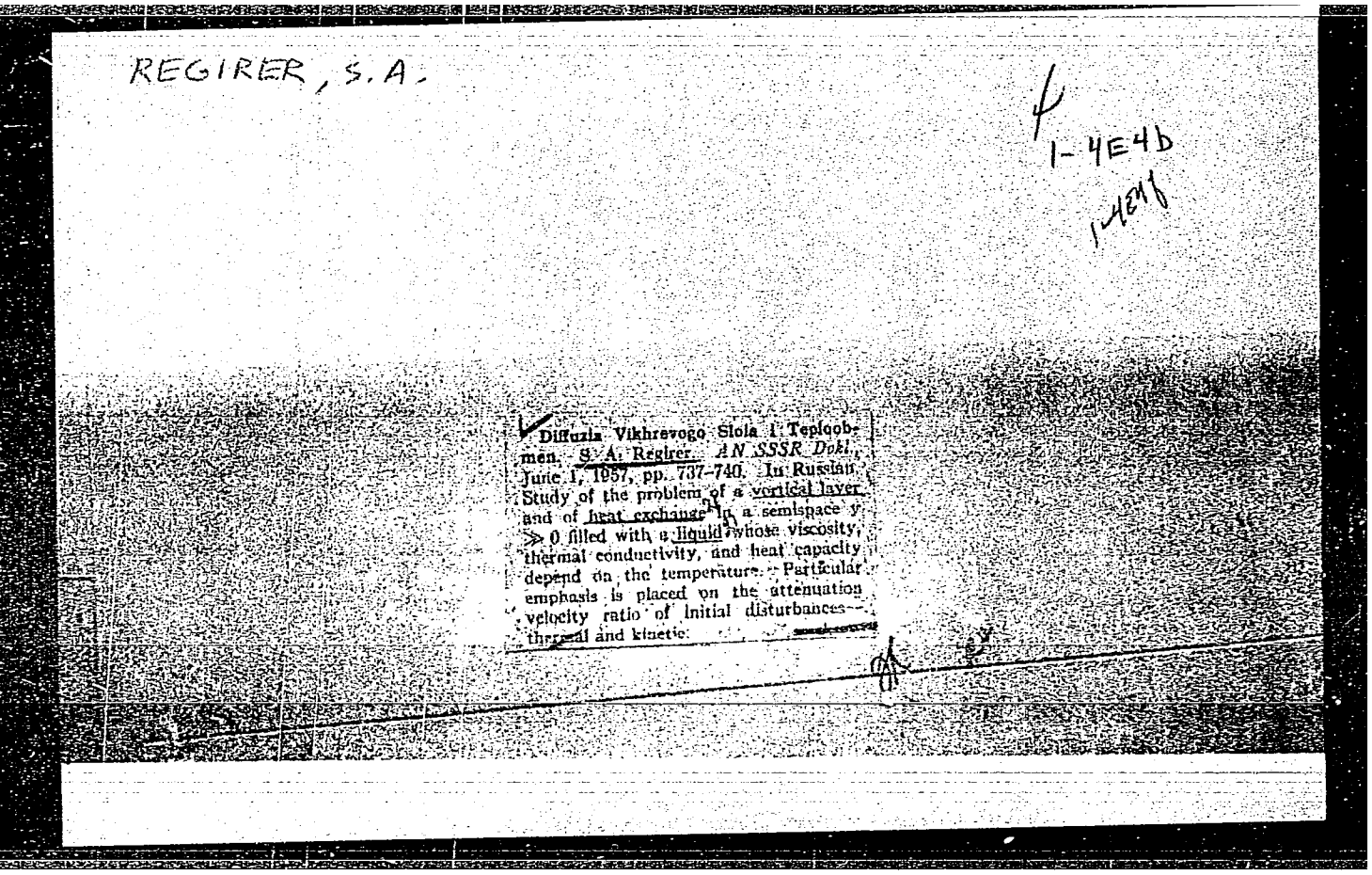
Card 1/2

USSR/Physical Chemistry - Liquids and Amorphous Bodies. Gases, B-6

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 307

Abstract: dependence of the viscosity on the temperature during steady-state conditions. The indicated method of partial solutions is applicable to the treatment of viscosimetry experiments and to the determination of the temperature variation of the viscosity in the neighborhood of the given temperature. A comparison of the method with isothermal theory is given and the applicability of such methods to viscosity studies, particularly of structured systems.

Card 2/2



REGIRER, S.A.

1-4E4b
1-4E4b

Diffuzia Vikhrevogo Sloia i Teploob-men. S. A. Regirer. *AN SSSR Dokl.*, June 1, 1957, pp. 737-740. In Russian.
Study of the problem of a vortical layer and of heat exchange in a semispace $y \gg 0$ filled with a liquid whose viscosity, thermal conductivity, and heat capacity depend on the temperature. Particular emphasis is placed on the attenuation velocity ratio of initial disturbances—thermal and kinetic.

Regirer, S.A

Distr: 4E4f/4F1/4E3d/4E4b
13/14/2 532.517

Certain Thermohydrodynamic Problems of the Settled One-Dimensional Flow of Viscous Liquid Capable of Forming Drops

S.A. Regirer

Prikl. Mat. Mekh. 21(3), 424-430 1957

U.S.S.R.

Discusses a one-dimensional flow of a viscous fluid, sufficiently liquid to form drops, with heat transfer and taking into account the effect of temperature and energy dissipation on viscosity. The final energy equation is applied to the cases of a pressure flow in a tube and a free (pressure-less) flow. Several numerical examples are considered and all possible solutions for simple boundary conditions are found when velocity is constant along the isotherms. Bibl. 12.

AUTHOR: Regirer, S. A. 20-114-4-16/63

TITLE: The Diffusion of the Vortical Layer and Heat Exchange (Diffuziya vikhrevogo sloya i teploobmen)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 114, Nr 4, pp. 737-740 (USSR)

ABSTRACT: The author investigates the automodellike problem of the diffusion of a vortical layer and the heat exchange in the semispace $y \geqslant 0$. This semispace is filled with a liquid, the viscosity, heat conductivity and heat capacity of which depend upon temperature. In the beginning the liquid is at rest and has temperature of $T = 0$. The surface $y = 0$ begins to move in the z-direction with the constant velocity U and the temperature suddenly rises to $T = T_c$. When solving this problem, the problem of the ratio of damping velocities of the initially existing thermal and kinematic perturbation is of especial interest. The equation system of this problem is written down. The problem is reduced to a system of ordinary differential equations and can be solved numerically by means of differential analyzer. In this sense an exact solution of the problem is possible. If the physical parameters of the problem are constant, the system of differential equations can be solved by

Card 1/2

quadratures.
Next, the behavior of the functions $u(r)$ and $\theta(r)$ at high values of t is investigated (t here denotes time). For the problem investigated here both temperature perturbations tend to an increase of temperature. Also for variable viscosity approximated estimations can be obtained. There are 2 figures and 1 reference, 1 of which is Slavic.

PRESENTED: December 18, 1956 by S. L. Sobolev, Member, Academy of Sciences, USSR

SUBMITTED: March 31, 1956

REGIRER, S.A.

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